

CONTRIBUTIONS

SUBMITTED

TO THE COMMITTEE

APPOINTED FOR

Procuring Information

FOR

Extending the Plan and Improving the general Economy

OF THE

CHESTER GENERAL INFIRMARY,

AS A BASIS

FOR

DRAWING UP THE SECOND PART OF THEIR REPORT

AGREEABLY TO THE INSTRUCTIONS

OF THE

SPECIAL GENERAL MEETING

OF THE EIGHTH SEPTEMBER LAST;

Addressed to the GOVERNORS and SUBSCRIBERS in general;

BY A MEMBER OF THE COMMITTEE.

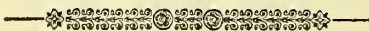
LEGE SED ELIGE.

CHESTER:

PRINTED BY T. GRIFFITH, BRIDGE-STREET.

1825.

CHESTER INFIRMARY.



At the Weekly Board, 6th July, 1824,

IT WAS MOVED,

That the MEDICAL OFFICERS be earnestly requested to meet privately, to agree upon an outline Plan of Improvement, for the better enabling the Committee, as a body, to carry into effect the resolution passed this day.

On the 3d January, 1825,

At a Meeting of the Committee appointed for the general improvement of the Infirmary,

IT WAS MOVED,

That the evidence in favour of, as well as of that against, the principle of heating and ventilating private dwellings, hospitals, public buildings, &c. &c. as conducted by Mr. Sylvester, be referred to the Medical Officers of this Institution, and that they be requested to draw up a memorial, medical and philosophical, upon the subject, for the guidance of public opinion at the Special General Meeting to be held for receiving the 2nd part of the Report of the Committee upon the State of the Charity.

PREFACE.

Chester, May 19th, 1825.

SIR,

I AM requested by the BUILDING COMMITTEE, appointed 17th instant, to carry into effect the Intended Alterations at the CHESTER INFIRMARY, to inform you that the Plans approved by the Special General Board, with some slight modifications made by the Committee, are now lying on the table in the Board-Room. It is the wish of the Committee to receive from you, *your written* sentiments upon the Plans, with any alterations or deviations you would wish to recommend, previously to Saturday the 28th inst. when the Committee meet in the Board-Room, at eleven o'clock in the forenoon.

I have the honour to be, Sir,

Very respectfully, Your's, &c. &c.

WILLIAM COLE, JUNR.

ARCHITECT TO THE COMMITTEE.

Dr. Cumming.

Bridge-Street, 27th May, 1825.

GENTLEMEN,

HAVING taken a lively interest in the fate of the "PROPOSALS FOR EXTENDING THE PLAN AND IMPROVING THE GENERAL ECONOMY OF THE CHESTER INFIRMARY," I beg leave to submit to your perusal the accompanying "CONTRIBUTIONS," (prior to publication) as containing my sentiments on these highly important subjects.

As to the merits of the Plan recommended by Mr. BAGNALL, and adopted by the last Special General Meeting of the 17th May, you will observe that I think favourably of it in many respects. But it is my most solemn opinion, that it is inferior, in point of many essentials, to that laid before the meeting, of the 8th September last, by Mr. COLE, and as published with the Report of the Committee of Improvement. But you will say, that the Governors have decided the question by appointing you, at their last General Special Meeting, to carry a *specific* Plan into effect. I am ready to admit the truth of the position, but I feel assured that an appeal from you in favour of any modification or extension of the Plan agreed upon, so as to secure the greatest degree of improvement at the least possible expense, will be most gratefully received by the subscribers and public in general.

For myself, I have to express my regret that the Medical Officers did not, in the beginning, take their proper share of responsibility in leading the public mind in favor of the proposed improvements, "in the separation and classification of the patients, in the warming and ventilating the different wards, in the establishment of day-rooms, &c. &c." as any marked difference of opinion on their part could not fail, in the more advanced stages of the investigation, materially to injure the interests of the charity committed to their care. But it will readily be admitted that it is much more easy to start objections than to obviate them, and therefore it is with no ordinary degree of satisfaction that I find you have afforded them a favorable opportunity for stating what they consider to be the elements of legitimate Hospital improvement, in making their remarks upon Mr. BAGNALL's Plan.

Permit me to offer to your consideration the accompanying Plan for roofing in the quadrangle, (as laid before the late Committee) suggested by Mr. HARRISON, but Planned by Mr. COLE. In fact, it may be viewed in the light of an extension of the principle embraced in Mr. BAGNALL's Plan, as you will perceive that there are similar Galleries, &c. but by placing the principal stair-case, with dome light in the centre of the building (as in the Derby Infirmary)—as also the nurses'-rooms and baths, in the way proposed—FOUR NAY-ROOMS—together with two capital wards (in the site of the present front stair-case) capable of containing twelve patients—and a complete suit of apartments for a Dispensary, as in Mr. COLE's published Plans, would be obtained at a very light additional expense (£300) without sacrificing the convenience and effect of a principal stair-case.

But, important as the proposed modifications of the plan of the buildings are, they sink, in my humble opinion, into nothing, in comparison with the value of judiciously revising the existing code of rules and regulations, the charity being declared, by the most competent authorities, to be in a state bordering upon that of disorganization.

Having thus attempted, at your request, to give an estimate of the merits of the Plan in question, together with hints for its improvement; and, at the same time, to convince, by the accompanying documents, my sense of the duties belonging to my appointment upon the late Committee, I have now, finally, to withdraw from the very unequal contest in which, for nearly twelve months, I have been engaged.

I remain, Gentlemen,

Your obedient humble Servant,

GEORGE CUMMING.

P.S.—Would not the stair-case, upon the Plan proposed, form a most convenient Chapel; the patients, male and female, having merely to arrange themselves along the galleries upon a level with their respective wards, immediately under the eye of the Chaplain, and without the merest noise, hurry, or confusion; while those too ill to attend, convalescents from fever, and the Magdalen patients, might be placed in the different nurses'-rooms, bath-rooms, &c. so as to hear Divine Service regularly performed without mixing with the general patients.

To the Committee appointed for superintending the Improvement }
of the Chester General Infirmary. }

CHESTER INFIRMARY,

Board Room, 8th September, 1824.

AT THE SPECIAL GENERAL MEETING OF THE GOVERNORS, held this day, for the purpose of receiving the Report and Plans of the Committee, appointed on the 15th of June last, for superintending the erection of convalescent Wards, Baths, &c.

RESOLVED,

That the Report now read be received.

That this Board, duly appreciating the importance of the labours of the Committee, as modified at the desire of the Weekly Board, of July 6th, do request them to continue their inquiries—to confer with Mr. SYLVESTER, as to the cost and the best mode of introducing his Apparatus for warming and ventilating the Building, as well as for Cooking, Washing, &c. and it is further requested of the Committee to take under their consideration any Plans which may be submitted to them, and to apply for such other Plans as they may think will be desirable to ensure the best improvements for the Infirmary, and to prosecute their examination into the Rules and Regulations of the Charity.

That when the Committee shall be prepared with a full Report upon all points affecting the interests of the Charity, they inform the Weekly Board of the same, who are hereby requested to call a Special General Meeting of the Governors to consider and decide upon it; and that, in the mean, time the Secretary be ordered to send to each of the Governors a printed Copy of the Report read this day, and the Lithographic Plans of Mr. COLE, JUNR.

That the Committee be requested to consider of the best mode of effecting the very important improvements proposed, so that the funded property of the Charity shall be encroached upon as little as possible, and that for this, or the general purposes of the Committee, they be authorized to add to their number the following gentlemen:—Lord Belgrave, Col. Ince, Rev. R. Massie, G. B. Granville, Esq. C. Morrall, Esq. H. Potts, Esq.

REPORT.

Since the last Special General Meeting of the Governors, (8th of September last) your Committee have met repeatedly for the purpose of taking into consideration the different Plans submitted to their notice, as well as for that of receiving suggestions for the general improvement of the Infirmary. Of the Plans in question, the most extensive has been received from G. ROWLANDS, Esq. Senior Surgeon to the Institution, and which is, in many respects, worthy of the attention of the Governors, as it embraces the important principle of separating and classifying the patients, medical and surgical, by dividing the long wards after the manner denoted in Mr. COLE's Plans. In Mr. ROWLAND's Plans too, day-rooms for the convalescent are provided, and every attention has been paid to arranging the Baths, &c. in the most convenient situations. Nor have the instructions of the Committee, to provide for the introduction of every improvement, made at other similar establishments, in cooking, washing, &c. been forgotten. But the chief objection to the Plan is the great expense with which its completion would be attended; neither does it provide for (as in Mr. COLE's Plans) a suit of apartments for treating the Out-Patients, as at a Dispensary, an object which will turn out in the sequel to be of primary importance. Indeed, the existing accommodation for the Medical Officers and patients is highly defective, as it may happen that four Physicians and three Surgeons may be obliged to meet on public days to examine and to prescribe for their respective Patients, male and female, in the same room, in dimensions hardly eighteen feet square.

The next Plan to which your Committee have to turn the attention of the Governors is that of Mr. LUNT, which provides for the formation of galleries for exercise and communication, as in Mr. ROWLAND's Plan, as also for the establishment of improved baths and water-closets, in two projecting buildings of ten feet, from the galleries into the quadrangle, after the manner of the new or cross building represented in Mr. COLE's Plan. The Chapel, in this Plan, as well as in that of Mr. ROWLANDS, is considerably enlarged by throwing a bow-window into the quadrangle.

Mr. BAGNALL has also presented the Committee with a Plan, the leading peculiarities of which consist in improving the ventilation of the quadrangle, by forming a sunk area externally and internally, and in appropriating, as in Mr. COLE's Plan, the apartments of the basement story to offices. Mr. Bagnall proposes a gallery round the interior of the building, for the purposes of communicating with and ventilating the different wards, as well as of enlarging the dimensions of those wards on the east and west side of the building, and by placing the nurses'-rooms, baths, water-closets, &c. in the centre divisions of the long wards, he makes a considerable improvement at a moderate expense. The Chapel, however, and the day-room in the Magdalen establishment, according to the Plan, must be converted into passage-rooms from the stairs to the galleries. And it may be observed, that though none of the above Plans provide for the introduction of the modern improvements made in heating and ventilating similar buildings, Mr. Sylvester has given it as his opinion, that they may easily be combined with any of them.

Dr. WHITTEL too has given in a Plan, but as it rejects the principle of separating and classifying the patients, the establishment of day-rooms, &c. it may cursorily be disposed of.

The last Plan, to which your Committee have to advert, is the joint production of the Committee themselves, but which, candour compels them to admit, upon consideration, is inferior to the majority of the above.

As the question, therefore, now stands, your Committee beg to suggest the propriety of referring the different Plans to some experienced Architect, in order to insure to the public the greatest improvement at the least possible expense; and they are glad to avail themselves of the opportunity to state that the eminent County Architect, THOMAS HARRISON, Esq. has given it as his opinion that the best mode to carry the proposed improvements into effect, would be to roof in the quadrangle, providing thereby a handsome central staircase with dome light and galleries, and with nurses'-rooms, baths, water-closets, &c. out of a portion of the included area. By this arrangement accommodation, or space, for at least 20 additional patients, as well as a suit of apartments for a Dispensary, would be provided for.

The separation and classification of Patients according to disease, is unquestionably the most important of modern improvements. In the CHESTER INFIRMARY the only division of Patients is into male and female, who are of course lodged in separate wards: but should the modification of the Plan of the Building, after the manner recommended by Mr. COLE, Mr. ROWLANDS, and others, take place, the medical may be separated from the surgical Patients; and these two divisions may likewise be arranged according to similarity of wants and disease.

Your Committee, in the first part of their Report, having recommended regulated ventilation, upon the principle of that adopted at the Derby, Nottingham, Birmingham, and London Hospitals, are sorry to observe that a strong opposition has been raised against the measure; but it would be short-sighted on the part of those concerned, not to make every arrangement for its prospective introduction in whatever Plan may be agreed upon for the improvement of the Infirmary, especially even as granting, that in the present state of our knowledge, the system is imperfect as far as heated air is concerned: no person can deny that the requisite flues and air tunnels would be pre-eminently useful in improving the permanent ventilation of the Institution, the extremes of temperature, in Winter as well as in Summer, not only being capable of being modified from ten to fifteen degrees, but as the pure air is made to enter upon a level with the floors of the different wards, the ventilators in the ceilings being connected with air trunks or chimnies, would be sure to carry off the vitiated air as generated, whether by respiration or other causes; and as the salubrity of the air in the Infirmary, at present, mainly depends upon keeping the windows open, what must become of the sick at night or when the temperature of the atmosphere in the day time is too low to allow of the windows being opened? In short, a supply of fresh air is essentially necessary in every Hospital, night and day, and care should be taken that it be admitted in such a manner that the patients fears may not be alarmed, nor any symptom of disease aggravated, by its falling upon them in currents. Its temperature, also, ought to be regarded in the cure of diseases, and Dr. ROLLO, who has paid great attention to this important subject, observes, "That the temperature of a ward should never be under 45 nor exceed 60 degrees; and that there are no diseases in a Military Hospital, except some states of fever, in which a lower temperature than 45° will not be prejudicial or uncomfortable. Patients under pectoral complaints, and also under a mercurial process, require a temperature rather above than below 50°. The great object in these cases, therefore, is to regulate the ventilation, so that the temperature shall not be diminished, when the external air is below 45 degrees of Fahrenheit."

Your Committee having thus attempted to give an account of the different Plans submitted to them, together with such remarks as they deemed might be useful, have now to enter upon the momentous question of

REGULATIONS.

WHEN the Infirmary was instituted in 1756, and for many years afterwards, the object of the charity was

strictly confined to the relief of the sick-poor, under the divisions of In and Out-Patients, the latter class consisting of cases rejected by the Physicians and Surgeons as improper for Hospital treatment, and of such other poor persons, residing in or near the City, as might apply once a-week for advice and medicine after the manner of a Dispensary:—The idea of an Alms-House being totally irreconcilable with that of a well regulated Infirmary, deriving its income from the voluntary contributions of the benevolent; and, highly meritorious as are the individual endeavours of the Medical Officers to infuse something like order and propriety into the treatment of Out-Patients, since the publication of the first part of their Report, your Committee cannot receive the same as a tacit improvement, much more being wanted to render the Institution comparatively complete.

By RULE 23 it is ordered—That there be a Weekly Board of Governors, which shall consist of five at least, to meet every Tuesday, at eleven o'clock, at the Infirmary, to regulate all matters relating to the admission and discharge of patients, to enquire into the behaviour of all officers, apprentices, and servants, to examine and pass accounts, direct payments, &c.

RULE 28. That Patients be admitted and discharged every Tuesday by the Weekly Board, between the hours of eleven and twelve; after which time no recommendatory letters will be received.

RULE 33. That no persons be admitted as either In or Out-Patients, who are themselves able to pay for medicines and medical attendance.

RULE 51. That the Out-Patients be assisted with advice and medicine, and be no other way chargeable to the Institution; and that they bring fillets for bleeding, and phials and gallipots for medicine.

RULE 52. That the hours for serving the Out-Patients with medicine be from nine to twelve in the morning, and from three to seven in the evening, except in urgent cases.

RULE 53. That such Out-Patients as absent themselves for three Fridays successively, without leave from their Physician or Surgeon, and without giving them a satisfactory reason for their absence, be discharged.

RULE 63. That the Physicians and Surgeons, one of each, do attend, in their turns, at the Infirmary every Tuesday, at eleven o'clock, to examine those who shall be recommended for Patients, to certify their opinions of the several cases to the Board, and to receive under their care such as shall be admitted.

RULE 64. That the Physicians and Surgeons do meet at the Infirmary every Friday, at eleven o'clock, to visit their In-Patients, to consult upon difficult cases, and to prescribe for their out-patients then on their books.

RULE 78. That the House-Surgeon and Apothecary visit all the wards every morning, and be prepared to report the state of the Patients to the physician or Surgeon of the week.

RULE 79. That he dispense no medicines without the directions of the Physicians or Surgeons, except in cases of necessity, when they cannot be consulted.

RULE 81. That he do not presume to practice as a Surgeon or as an Accoucher out of the House, or attend any other business than that of the Infirmary.

RULE 86. That he never be absent from the Infirmary when the Physicians and Surgeons are to attend, nor at any other time above three hours together, and that he always give notice to the Matron, and be within call; that he be at home at ten o'clock at farthest in the evening, and do not lie out of the house, without special leave from the Board or Chairman, and that in such cases he appoint another Apothecary, who shall be approved by the Physicians; to officiate in his place.

Such is the theory of the constitution of the CHESTER INFIRMARY; but the practice of it is widely different; and it is a remarkable circumstance that in the revised editions of the regulations, in 1799 and 1816, there is not the merest allusion to the following facts:—1stly, That for nearly twenty years the Infirmary has been open for the reception of letters of recommendation not only on Tuesdays, but every day of the week, Sundays excepted. 2ndly, That the House-Surgeon (who ought to be viewed in the light of the resident medical director of the Institution) is, from necessity, absent the greater part of the day, while visiting the Out-Patients in the City and suburbs, and in attending the City Workhouse and County Gaol. 3rdly, That a considerable majority of the Out-Patients (annually reported to be cured, relieved, &c.) never come under the care of any Physician or Surgeon belonging to the Institution.

Your Committee fear that many of the subscribers will learn the above with much surprise and concern ; but as the duty of your Committee is to do good if possible, not wantonly to wound public or private feeling by the display of the minor defects and irregularities of an important provincial charity, they hasten to submit the following new or additional regulations, to the consideration of the meeting and of the subscribers in general :—

That an Annual Committee be appointed for managing the affairs of the Institution, instead of the present system of open Weekly Boards, after the manner of the Salop and other Infirmarys; and that the medical officers in attendance for the week, be considered (*ex officio*) as members of the committee.

That an optional increase of subscriptions, for an increase of privileges, be admitted and recommended.

That the funds of the charity be hereafter applied to the distinct support of an united Hospital and Dispensary, with appropriate rules and regulations for each department.

That the principle of appointing honorary or consulting Physicians and Surgeons, serving, or who have served, the charity, be acknowledged.

That, in future, two Physicians and two Surgeons be considered as the medical staff of the Hospital.

That the same number of officers be attached to the Dispensary.

That the Physicians and Surgeons of the Dispensary however be considered as attached to the Hospital, and have a right to attend at all consultations, operations, &c. ; and in case of vacancy, by death or resignation, the senior Dispensary Physician or Surgeon to have the appointment.

That a distinct shop and Apothecary be appropriated to each division of the charity.

That one apprentice be allowed to each Apothecary, and in case of resignation or removal of the Apothecary, the apprentice be transferred to his successor.

That the Physicians be allowed to introduce a clerk or pupil each, who is intended for the profession of physic, or who has been regularly brought up for general practice.

That the Surgeons be entitled to introduce pupils as dressers during the last 2 years of their apprenticeship.

That the pupils of resident Surgeons and Apothecaries, not attached to the Institution, be admitted to see the general practice of the Infirmary, upon paying a given sum per annum, the two last years of their apprenticeship.

That no pupil be allowed to enter the wards without the direct authority, or in the presence of, some of the Physicians, or Surgeons, or House-Apothecary.

That a Library and Museum be established, and that a moiety of the apprentice fees, as well as of that of the general pupils, be applied to its support.

That the Out, or Dispensary, Patients be divided into two classes, those capable of giving personal attendance on stated days, and of others, not able to attend under the name of Home-Patients.

That a Physician and Surgeon attend at the Dispensary, on two stated days in every week, to prescribe for the Patients properly recommended.

That the letters for the Home-Patients be sent to the Physician or Surgeon of the week, according to the nature of the cases, before nine o'clock in the morning, so that the sick have the most prompt assistance.

That, in case of sickness, the Physician or Surgeon in attendance for the week do appoint another Physician or Surgeon to attend for him at the Dispensary, as well as to visit the Home-Patients.

That the stewards of the different friendly clubs in the City be invited to become subscribers to the Infirmary, as the proposed alterations in the rules of the charity would enable them to command an efficient system of medical assistance, at a light expense, for the members of their respective societies.

That, with the view to relieve the pressure upon the funds of the Infirmary, and at the same time to promote the interests of humanity, a given number of Patients, properly recommended, be admitted, upon paying a stated weekly allowance for their board, &c. after the manner of the *Maisons de Santé* of France, and of that of the Asylum for the Recovery of Health lately established in London.

That the progress of vaccination be particularly attended to.

That baths be established for the use of the Out or Dispensary Patients.

That, as the poor often suffer from their want of knowledge of the rules of public charities, benevolent individuals be appointed in particular districts as REFEREES.

That in case the proposed increase of annual subscriptions should take place, it shall chiefly be applied to the relief of herniary complaints, &c.

That Hospital-Dresses, after the plan pursued at military institutions, be provided for convalescent patients and such others as may require them.

That, with the view of promoting the interests of medical science, Monthly and Annual Reports, drawn up from the journals of the Physicians and Surgeons, be regularly presented to the Committee; and that the Physicians and Surgeons be instructed to deliver to the House Surgeon or Apothecary an account of such difficult cases, operations, and remarkable dissections as may be judged worthy of being recorded, to be transcribed by him into proper books, and that all such reports and books shall be preserved as the property of the Infirmary.

That a Chaplain, conversant with the Welsh language, be appointed with a salary, and that he make weekly returns of the attendance, at Chapel, of the Matron, House-Surgeon, pupils, domestic servants, & patients.

That Governors residing at the distance of ten miles or upwards shall have the privilege of voting, at all elections, by another Governor, after the manner prescribed, in rule 18, for ladies.

CONCLUSION.

Your Committee have now, as directed, to advert to the consideration of the best mode of raising the means for carrying the proposed improvements into effect, and they are glad to avail themselves of the suggestions of several leading subscribers to propose, "That, as the benefits of the Infirmary are general and diffusive, an ORATORIO (in aid of private contributions) would be the best tax upon popular feeling: but your Committee beg to observe, that they by no means are partial to the principle of endeavouring to establish a large permanent or private fund, as every exertion ought to be made to keep up the annual subscriptions to the mean annual demands of the Institution, the permanent income being considered merely available to meet an unexpected rise in the price of provisions, the expense of repairs, and of that of introducing, from time to time, every improvement made at similar institutions; as from "the moment a public charity is known to be rich, it will relatively fail to secure public support; and, with the loss of that, the chance of doing good, from multiplied "subscriptions, will fall off in the same proportion."

ILLUSTRATIONS

Of the proposed Improvements for the Chester Infirmary.

"WHOEVER has frequented the miserable habitations of the lowest class of poor, and has seen disease aggravated by a total want of every comfort arising from suitable diet, cleanliness, and medicine, must be struck with pleasure at the change on their admission into a Hospital where these wants are abundantly supplied, and where a number of skilful persons are co-operating for their relief. On the other hand, when he walks through the long wards of a crowded Hospital, and surveys the languid countenances of the patients—when he feels the peculiarly noisome effluvia so unfriendly to every vigorous principle of life, and compares their transient effect upon him with that to be expected by those who are constantly breathing them and imbibing them at every pore, he will be apt to look upon a Hospital as a dismal prison, where the sick are shut up from the rest of mankind to perish by mutual contagion.

"THESE obvious and simple ideas answer in fact to the real state of advantages and disadvantages in Hospitals. As far as diet, nursing, and medical assistance are concerned, they are of eminent use and comfort to the poor; but the grand necessary of life, air, is never to be had in a salutary degree of purity—frequently is vitiated so as to become a poison. Every Hospital, I fear, without exception, may in some measure be considered as a Lazaretto, having its own peculiar disease within it. That dreadful distemper, little less malignant than the plague itself, distinguished by the title of the Gaol or Hospital Fever, has long been known as the inbred pestilence of crowded receptacles for the sick, and has thinned our fleets and armies more than the sword of the enemy. SIR JOHN PRINGLE the great observer of military diseases, expresses, in the strongest terms, his dread of this fatal distemper, and his disapprobation of such a disposition of the sick in large general Hospitals as is almost certain to produce it. When the same causes act in so inferior a degree, as not to occasion such alarming consequences, they are still far from being innocent. I am intimately acquainted with a country Infirmary remarkable for neatness and excellence of construction, and I have even there very frequently seen a slow depressing fever, the offspring of putridity, creep over the patients other complaint, become the principal disorder, and resist every remedy that could be thought of, till dismissal from the house produced a spontaneous cure.

"MY design, in offering to view facts of this kind, is not to inculcate a general and undistinguishing prepossession against these charitable institutions, but merely to show that there is a real necessity for extraordinary caution in their management; and that the present fashion of indiscriminately hurrying the poor sick into Hospitals, and being busied with a benevolent zeal to fill them as full as possible, may be productive of consequences which are quite opposite to the kind intentions of humanity. I have no manner of doubt that they may be rendered eminently useful, and that the greatest part of their inconveniences may be avoided.

"THE various causes of vitiation of the air have been pointed out with great precision, and means of prevention suggested in particular cases by many of the improvers of modern practice. The great character several of their works have deservedly acquired gives reason to presume, that every medical reader must be acquainted with them; a recapitulation, therefore, of their general doctrine would be useless, especially as many parts of it are not applicable to our subject. It is not to be supposed that any important mistakes can be committed, in a thing so well known, and so much in our power, as the choice of a proper situation and exposure of a Hospital with regard to the state of the air, as depending upon heat and cold, dryness and moisture, and the like external circumstances. It is in the laying out of the building, and the internal conduct of the house, that we are to look for the source of those errors which may prove so fatal. In planning the building two quite opposite and incompatible views are found to interfere. The Architect considers it as his business to manage his room and materials in such a manner as to accommodate the greatest number of people in the least possible space. The Physician, on the contrary, would leave as much vacant space, occupied by the fresh air alone circulating freely, as was in any degree compatible with use and convenience. It is to the prevalence of the former above the latter that all our complaints are owing.

"THE most common plan of a Hospital is a quadrangle, the ground floors of which is appropriated to offices, and the stores above to lodging the sick, which are, for that purpose, disposed into long rooms running the whole length of the sides, and containing, according to the size of the building, perhaps from twenty to fifty beds ranging along the opposite walls.

"THE disposition of the lodging rooms into long wards, is another, and a much more pernicious fault, inasmuch that I would assign it as the principal cause of bad air in Hospitals; and it is evident that this must be the case from the very reason which led to the contrivance, viz. that a large number might be lodged in a small space. Every person, even in health, by his breath and the effluvia arising from his body vitiates a quantity of air around him; and the only reason why we do not in general perceive any bad effects from the poison generated by this vitiation is, that it is usually diluted with a large quantity of fresh air, and carried off by a free circulation. If the quantity of air be lessened, or its circulation impeded, noxious effects will be proportionally shown. The degree to which this may be done without producing any injury of consequence cannot be exactly ascertained; but there is no doubt that it must become hurtful, when such a number as from twenty to fifty persons, many of them afflicted with ulcers and other diseases which tend to aggravate the putrescency of the fluids, are constantly confined together in a room just large enough to hold their beds. The circumstance of continuing through the day in the room where they slept, is a considerable aggravation of the evil. The bed-cloaths acquire a strong impregnation from the perspired vapours of the night, as is evident on first entering the bed-chamber of a single person in health, and their soft porous texture renders them extremely tenacious of every kind of effluvia. It would therefore be a good regulation in every Hospital, especially such as are in any degree crowded, that all the patients who are capable of sitting up should remain through the day in large airy halls, and that their wards and bedding should in the mean time be as much as possible exposed to ventilation.

"STILL, however, I am persuaded that every precaution and contrivance to sweeten the air will be only palliative while the great sources of contagion, large crowded wards, remain in use. SIR JOHN PRINGLE, indeed, recommends large wards for the Military Hospitals, but it is evident that he does it upon the supposition that more proportionable void space will be left in them than in small ones; for he lays it down as a rule, that so few patients should be admitted into each ward, that one unacquainted with the danger of bad air might imagine there was room for double or triple the number: a precaution, I will venture to say, observed in none of our Hospitals, since it would totally overthrow the *economical* plan upon which they are built. It is true the first appearance of a large ward strikes us with an idea of somewhat very spacious and airy; but if we conceive for a moment, in imagination, that it was partitioned into as many

separate divisions as there are patients, we shall be sensible how narrow a space is allotted to each. It is a farther objection to large wards, that if a particular cause of contagion prevails, it is by their means communicated to greater numbers than it otherwise would be. The illustrious author above-mentioned relates an instance of the malignant Hospital Fever beginning in a ward from no other cause than a mortified limb of one of the patients. The contagion thus raised would probably go no farther than that particular ward—by its being small, therefore, the number infected would have been less. VARIOUS OTHER CIRCUMSTANCES, SUCH AS THE MUTUAL DISTURBANCE AND TERROR ARISING AMONG THE SICK FROM THE SHOCKING VIEW OF EACH OTHER'S SUFFERINGS, THEIR AGONIES, RAVING AND DYING GROANS, ALL PLEAD STRONGLY WITH HUMANITY AGAINST THESE DISMAL LODGING PLACES. I AM AT A LOSS FOR TERMS STRONG ENOUGH TO CENSURE A PRACTICE WHICH, I VERILY BELIEVE, WHEN FOLLOWED TO ITS FULL EXTENT IN A LARGE CROWDED HOSPITAL IS THE SOURCE OF MORE FATAL CONSEQUENCES THAN THE ORIGINAL DISEASES OF THE PATIENTS.”—*Extracted from Thoughts on Hospitals, by the late Dr. Aikin.*

ON VENTILATION.—By Sir G. O. Paul, Bart.

“IT is about twenty years (1801) since the deleterious consequences of inattention to Ventilation were set forth by Mr. HOWARD. So strong and so general was the conviction of the public mind, not only as to the evil pointed out, but regarding the remedies proposed by that indefatigable philanthropist, that the legislature thought fit to adopt the whole of his principles, and to make them the basis of several positive laws, under the direction of which the greater number of prisons of the kingdom have since been re-constructed, and the remainder (with few exceptions) altered in conformity to the principle recommended by him, namely, *that of introducing currents of fresh air into and through every apartment.*

“IN these prisons, where attention is also paid to personal cleanliness, I venture to say, the Gaol Fever is unknown, unless brought into them by prisoners committed in a state of previous infection.

“BY equal exertion, on the like principles, the healthiness of the ships of war has been so improved, that they are no longer sources of this desolating pestilence.

“REGARDING Hospitals I fear it cannot be proved that a relief so complete has been effected. Mr. HOWARD was not sparing in his strictures on the management of this important branch of our public institutions; but the improvement he suggested went no farther than simply the introduction of fresh air. The reconciling this advantage with that generally diffused warmth, necessary in sick rooms, seems to have escaped his contemplation.

“OF the several Hospitals constructed since his observations were made public, most have been planned with a view to facilitate the passage of outward air through the wards. The Directors of old Hospitals have adopted alterations more or less tending to the same purpose; but all seem to have rested at this point: yet, considering the importance of pure air to patients, during the tedious cure of compound fractures, and other accidents or diseases, together with the no less important object of securing them from currents of cold air, it cannot be denied that much still remains to be effected.

“THE County Gaol at Gloucester is constructed on the principles of admitting air to pass into and through it in straight lines, from one extremity to the other. There is no obstruction to a freedom of current, other than as the streams of air passing through the long passages, open at each end, move with the greater velocity, they of necessity carry with them the weaker currents, passing into and through the cells at right angles.

“FROM the time this prison was opened, in 1791, until the year 1800, about 1300 persons were committed to it; and, on the average, about 100 prisoners were constantly confined in it. In these nine years the number of deaths has been thirteen; and of these, four sunk under the effects of disease brought into prison with them. During the last year, the prison has been crowded in an uncommon and very improper degree; two hundred and fourteen have been confined, and the average number has been one hundred and sixty-seven. One prisoner only has died (a woman aged sixty) in the month of October last. At the opening of the Spring Assizes, 1801, (the time of the greatest numbers) there was not one prisoner sick or in the Hospital ward.

“BY this statement it appears, that the proportion of deaths is so much below the common average, in the ordinary situations of life, that the healthiness of this abode may be said to be peculiar; and it is in proof, that however currents of air may be found injurious to particular constitutions, they are not unfavourable to general health.

“PRISONERS, on their rising in the morning, are removed into small working-rooms or wards situated on the ground-floor. These day apartments are, in like manner, constructed with cross openings near the ceiling or crown of the arch; but there is also in each of them an open fire-place. Respecting these apartments, my observations tend to confirm COUNT RUMFORD's objection to open fires, and his preference to closed stoves. Nay, farther, I am disposed to admit, that openings for free Ventilation are incompatible with strong fires in open fire-places.

“IT is certain that, in rooms so provided, the danger arising from impure air is completely guarded against; yet this advantage is gained at the risk of another evil, which, though not so important, should, if possible, be avoided.

“THE air which in the same room without an open fire-place would pass inwards by one opening, and outwards by the other, being attracted by the fire to supply the constant rarefaction in the chimney, passes inwards from both openings towards the fire-place, and the body of a person placed near it, being in its current, is exposed to the danger of partial chill. To this circumstance, in these apartments, I am inclined to attribute the few complaints of a dysentery or aguish tendency, which have occasionally interrupted the general health of this prison.

“IN the Hospital, the scene of my observations, the morbid effects of foul air in the wards have, until lately, been no otherwise relieved than,

FIRST—By introducing currents of fresh air by the windows, with an improved mode of hanging the upper sash, peculiar to this Hospital.

SECONDLY—By piercing holes in the ceiling of the wards, and by means of plastered channels or wood funnels, leading the foul air, rising to them, to the roof.

"IN warm weather, when the doors of the wards are open, and the fires low, these channels or funnels operate with considerable effect. Much foul air will, by its relative specific lightness, (not being counteracted by a stronger power) ascend them and escape; a further portion will pass off by the windows, opening to the leeward, and Ventilation may be duly effected.

"BUT, on the contrary, when the doors are shut, and strong fires are made, these will inevitably attract the currents of air inwards and towards them, from all the openings; and, should patients be situated in their course, the effect cannot fail to be injurious.

"BESIDES, as the windows are generally closed in the night (the most important time for Ventilation) no other change of air takes place, but what is effected by the open fires, which, whilst supplied immediately from the middle region, are constantly consuming the best air of the room.

"HENCE it appears that free Ventilation, or the transverse passage of outward air, may be inconsistent with the general warmth required in the apartments of the sick; and that channels for the escape of foul air, unassisted by a power more constant and decisive than the relative specific lightness of that air, (in rooms or wards with open fire-places) is a mean inefficient to preserving a healthful respiration in the crowded wards of a Hospital."—*Extracted from the Transactions of the Society of Arts.*

"Result of an Inquiry into the state of various Infirmeries, with a view to the Improvement of the Infirmary at Newcastle.—By the late DR. CLARK.

"I SHALL begin with an account of those Hospitals which have the best accommodations for patients, which are conducted upon the most approved plan, and which ought to be received as models.

"THE ROYAL HOSPITAL at Woolwich consists of a centre and two wings. The centre contains sixteen wards, with six single bedsteads in each. The south wing is allotted to convalescents, and has eight wards which contain eight single bedsteads each. Besides these it has several small rooms for other purposes. The wards in the front building are distinguished into these—for sores, casualties, venereal, pectoral complaints, fevers, and miscellaneous diseases. The apartments in the north wing are occupied by the Surgeons.

"EVERY patient, when his case requires it, is placed in a separate room. The galleries are large, and intersect each other. Every window in the Hospital, galleries, and wards, has a ventilating contrivance; about an inch and a half in each pane in the bottom of the upper sash is cut away; a frame with glass is set across the window, resting upon the top of the under sash, and fastened to it by hinges; and this frame can be moved on the hinges, so as to make a greater or lesser angle with the window, and consequently to admit more or less air at pleasure, rising towards the ceiling, and preventing it from falling upon the patients. There is an aperture at the top, and several at the bottom of the door in each ward, with a slanting board on the inside to direct the air upwards. The doors of the ward open into the gallery, which runs through the centre of the building.

"THUS this Hospital enjoys the most complete succession of fresh air; but in cold weather it has also the advantage of being supplied with air of a proper temperature. By a peculiar invention of Mr. Moser's warm atmospheric air is conveyed, by means of earthen tubes placed perpendicularly, into the gallery of the first floor near the stair-case, and from thence into the wards by the holes in the doors. In winter, Dr. ROLLO, who has obligingly favoured me with much interesting intelligence respecting this Hospital, finds this contrivance of great use to patients in pectoral and other complaints, when the temperature of the air ranges below forty degrees. The temperature of air in a ward should, if possible, he observes, never be under 45 nor exceed 60 degrees of Fahrenheit's thermometer.

"THE bedsteads are made of hammered iron, with sacking bottoms, and fold up; the bed and bolster are palliasses filled with oat straw; the palliasses and sacking bottoms are washed, and the straw changed once every month, or oftener, if necessary.

"To this excellent Hospital is attached a Medical Library.

"FROM the 1st of January, 1796, to the 31st December, 1800, the total amount of the patients, in all diseases, admitted into the Hospital was 7526; the deaths 133, being one in 56 nearly; after deducting 1985 trivial complaints—one in 35. Fevers and other infectious diseases, are admitted into this Hospital. Of 27 fractures, simple and compound, one died; and of 22 amputations, 2 died.

"THE NORTHAMPTON INFIRMARY was rebuilt in 1793. It consists of eight large and seven small wards. The former are each 37 feet by 25, and 14 feet high. There are three windows on each side in every large ward. In each of these wards there are ten single bedsteads. The dimensions of the small wards are 17 feet 9 inches by 11 feet, and 14 feet high. Each of the small wards has one window opposite to its door, which opens into the passage, in which there is an opposite window. They each contain two bedsteads. The windows in all the wards are 7 feet by 3 feet 9 inches.

"IMMEDIATELY after every operation of consequence the patient is put into one of the small wards, and one of the convalescent patients is lodged with him. In medical cases, such as acute fevers, &c. where quiet and particular attention are required, the same arrangement is followed. This Infirmary is capable of receiving into it, at one time, 94 patients, (and it is often full) viz. 80 in the large and 14 in the small wards. This excellent Infirmary was rebuilt under the direction of Dr. KERR, who formerly served in the Military Hospitals abroad, and who, having seen the ill effects of crowding patients together, and vitiated air, has completely guarded against it in the construction of this house. The annual average of In-Patients is 659, and the deaths one in 31. The proportion of deaths, after amputations and compound fractures, is certainly not one in 20; in fractures of the skull, not above one in 8; and in simple fractures he does not recollect one unfortunate event.—'In the old Hospital one in 19 of the In-Patients (communibus annis) died.'—Pereival's Letter to Dr. Aikin.—Such is the difference between good and bad Hospital arrangement.

"LEEDS INFIRMARY.—This Infirmary has, in all, 17 wards; the two largest of which contain eleven beds.—Two wards contain 8, some 5, and the least wards 4 beds each. All these wards are 18 feet high. The two large wards, containing 11 single bedsteads, are each 42 feet by 15 feet 6 inches. The wards, containing 8 bedsteads each, are 33 feet by 18. The smallest wards, which contain 4 beds each, are 18 feet by 15. The large wards have 8 windows each; viz. one at each end, the rest nearly opposite to each

other. The other wards have 6, 4, and 2 windows each; except one ward, which has one window only.—This Infirmary has also a *large* ward for patients who have been recently couched; and when they can bear the light it is admitted by degrees. The house have beds for 128 patients; but the funds of the charity do not admit of more than 88 In-Patients to be in the house at one time; for which reason, there are always wards unoccupied, if, on any emergency, a *separate room should be required*. It would be a real improvement, if the wards containing 11 beds were divided, not only for the sake of more free ventilation, but because the particular distress of individuals must render more disagreeable the situation of the other patients; and in case of accidental infection, such large wards are extremely inconvenient. It has not been the practice to separate the medical from the surgical patients, but the advantages are so evident that it is my intention to propose it to the Board of Trustees for their approbation and adoption. The wards are ventilated by means of large circular apertures, placed near the top, which communicate with the great gallery, the doors of which open and shut at pleasure. As great attention is paid to cleanliness and ventilation in every part of the house, and to the perfect repair of the water closets, the air of the Infirmary is not in general much less pure and healthy than in private houses. There is an excellent Medical Library belonging to the Infirmary, supported by subscribers, both of the faculty and others; but all the books purchased become the property of the Trustees. This Infirmary was originally of smaller dimensions; but, as the capital of the charity increased, it was raised a story higher.—It is a rule to change from one ward to another every two months. The patients who are able to quit their beds dine in apartments fitted up for that purpose, and not in the wards. Of 619 In-Patients, admitted during 1800, 22 have died, being one in 28.

“GLASGOW INFIRMARY.—The Infirmary at Glasgow, constructed as nearly as possible according to the report made to the late King of France, by a Committee of Academy appointed to correct the faults of the Parisian Hospitals, consists of 8 wards, each containing 14 patients. To each ward are joined *four* small rooms, one of which is occupied by the nurse, and the other three are reserved for contagious diseases. They range along the passage to the water closets,—and opposite to their doors is the door of the staircase, forming a complete ventilation; and though the contagious diseases are many, no patient has received infection since the erection of the building. Although no accurate arrangement of diseases has yet been attempted, the Medical are separated from the Surgical patients, and contagious disorders kept apart with great care. If, from salivation or diarrhœa, &c. the smell becomes offensive, or noise from cough distressing to the rest, the patient is removed into a separate room or into a corner of the ward. The proportion of deaths, including infectious diseases, amounts to about one in 21; the proportion of deaths in fractures, one in 20, and in amputation one in 12.

“For the purpose of ventilation, the windows are placed directly opposite to each other; the door of each ward opens opposite the chimney, by which a current of air sweeps along the middle, without annoying the patients. There are no projections in the walls, but lockers sunk under each window, for the use of the patients. To guard against contagion, the bedsteads are of iron, and without curtains; the bed-clothes often changed, washed, and aired; and cleanliness unremittingly adopted in every department. Besides the stated quarterly meetings of the managers (24 in number), a committee meet to examine the weekly occurrences, and give proper directions; a manager or contributor, under the name of a visitor, examines each ward daily, notes in the minute-book whatever he sees or hears, and attends the weekly committee, who check every abuse, and adopt every improvement pointed out to them.

“Having already exceeded the limits at first prescribed, I shall shortly sum up, under a few distinct heads, the result of my reflections and inquiries into the state of Hospitals and Infirmaries, which may be assumed as axioms for directing their improvements:

“1. That the success, after compound fractures, amputations, and fractures of the skull, may in some measure be a criterion for ascertaining the salubrity of the air, and the nature of the accommodations for the sick, in Hospitals and Infirmaries; and that, whenever the mortality is great in *these*, in internal diseases it will be proportionably so. By the present defective reports of Infirmaries, the mortality in internal diseases, viz. those that are *medical*, cannot be truly ascertained, because the frequently fatal termination of the disease of many of those dismissed relieved, or made out-patients, is not known, and unnoticed in the reports.

“2. The recovery of patients labouring under compound fractures, and accidents of the skull, requiring operations, is rendered doubtful, by their *previous residence* in crowded and ill-ventilated wards; and their being returned into the same apartment *after* operation, affords still less chance of a favourable termination.

“3. That the treatment of diseases has been extremely successful, wherever a complete separation of patients, and an arrangement according to diseases in suitable wards, has been adopted.

“My exertions on this occasion will, I hope, be attributed to no other motive than an ardent zeal to place this upon a footing with the most approved institutions, for relieving, in the most effectual manner, the distresses of the afflicted, and promoting the improvement of the science of medicine.”

Description of the DERBYSHIRE GENERAL INFIRMARY, extracted from Mr. SILVESTER'S “Philosophy of Domestic Economy.”

“This admirable Infirmary consists of three stories, the basement story being a little sunk, and surrounded by an area. The middle and principal story is a little elevated; it is approached by steps and a portico supported by four doric pillars. The upper story is approached by a stair-case, leading from a spacious hall, in the middle of the building, which is lighted by several skylights, in the dome over the hall in the centre. In the basement story are the baths, which are warmed by steam, and are open to the public, and produce a considerable revenue to the charity—that one on the left of the entrance being kept at 84 degrees, that on the right at the temperature of 92 degrees. The steam engine and stove for warming and ventilating the different wards, day-rooms, and galleries, are also placed in this story, as likewise the kitchen, wash-house, laundry, &c. The middle story is principally devoted to the household part of the establishment, and the upper or attic story to the patients. The great staircase leads from the middle story to the gallery G, G, G, G, which occupies three sides of the hall and communicates with the convalescent rooms and the sleeping rooms. The operation room separates the mens' sides from the womens'. The rooms 3, 4, 5, 6, 7, 8, and 9, on each side, are similar in every respect; these are for the reception of patients in various stages of acute diseases. In most other Infirmaries the want of this still retirement for patients suffering acute pain, is an evil which cannot be fully appreciated, but by witnessing the benefits of these apartments. 16 is a small room containing a wooden cistern lined with lead, with a steam pipe and a pipe for cold water opening into it. It is employed as a bath; and can be used at pleasure as a cold or hot bath, or even as a vapour bath. The water closets are self-acting, and are fitted up in a superior manner.”

Account of the PAUPER LUNATIC ASYLUM at WAKEFIELD, in illustration of the mode of Warming and Ventilating the Derbyshire General Infirmary, as conducted by Mr. SYLVESTER.

" This building is in the form of the capital letter H a little shortened, the galleries running the whole length of each line, in three directions, from the intersecting points, the bed-rooms being contiguous, and opening into the same. These galleries are ten feet wide, and each bed-room is seven and a half by six and a half feet. The two principal staircases are in the intersections of the galleries, and are contained in a cylindrical space, with a single entrance at the landing, to each story, by which they are completely detached from the galleries. The building consists of three stories; and the separation of the male from the female division, is in the middle of the long gallery which unites the two sides of the H. Under each of the staircases, and the middle part of the building, there is a cellar story, in which the steam boiler and one of the stoves are placed. The stoves are fixed directly under the principal staircases, that on the male side being twenty-five feet below the basement story, the other twelve feet below the same. Two cold air flues are brought from the external air, directly to the level on which the stoves are placed. The entrances to these flues on the outside, are from two round towers in the walls of the airing grounds. On the top of each tower, is a turncap similar to that already described, by which the air is always forced into the flue with the velocity of the wind. After the air has passed through the stove, in the way explained in the former part of this work, it passes from the air chamber horizontally to perpendicular flues in the wall which surround the staircase. These flues are distinct for each story, and have outlets on all sides of the circular wall, from which the warm air is supplied with such velocity as to pervade the whole extent of each gallery.

" THERE are openings from the galleries over each door of the bed-rooms, by which the latter are kept at the uniform temperature of the galleries. From the bottom of each bed-room rises a perpendicular flue, which terminates in the roof of the building. There are two openings into each of these flues, one at the bottom of the room, and the other at the ceiling, the former is for the outlet in the winter season; the latter, with a view to promote an increased ventilation, is kept open during the summer; the air then escapes at a turncap in the roof, similar to that at the Derbyshire General Infirmary. To give some idea of the merits of this system of ventilation, the following particulars are stated: When the stoves are in full action, the air, on the average, moves with the velocity of five feet in a second; the area of each of the main flues is twelve feet, which gives 120 cubic feet, the quantity which passes through the whole house in every second. Supposing the whole cubic contents to be 400,000 cubic feet, the whole of the air will be changed in a little less than every hour. In the summer season, when there is no fire in the stoves, the ventilation goes on through the very same channels as in winter. The outlets at the ceiling are now opened, and this, with the assistance of the turncap, will at all times insure a perfect ventilation. The air being cooled to a certain degree, by its passage through the cold air flue.

" MUCH manual labour is saved in this establishment by a steam engine of two horse power, erected by Messrs. Fenton, Murray, and Wood, of Leeds. It is employed for pumping the water, and performs the labour of washing, and mangling linen. The steam boiler is of much larger size than is required for the engine, in order to supply the kitchen and baths, and to heat water in different parts of the building.

" THE male and female departments have each a separate kitchen of the same size, and fitted up similarly. In each there is a steaming table, two roasters, and two soup boilers, heated by steam. In the scullery is a hot water vessel, on the improved plan. These vessels are constantly full of water, which is heated by steam during the day, when the boiler is used for other purposes. And the temperature of the water is so preserved as to be sufficiently hot every morning. The steam condensed in this process produces a considerable quantity of distilled water, which is found a great convenience.

" THE wash house is doubtless the most complete at present known; its only defect is that of being too small. A washing machine is on the same principle with that already described, with some improvements. It is turned by the steam engine, and may be said to perform 9-10ths of the labour of washing. A spacious rain water tank is contiguous to the wash-house, from which an elevated cistern is supplied, and constantly kept full, by a small pump, fixed under the floor, and worked by the same shaft which turns the washing machine. A hot water vessel is connected with the above rain water cistern, similar to those in the sculleries. Pipes are carried from these vessels, and terminate in a set of stop cocks, arranged over a stone bench on which the wash tubs stand. These tubs can therefore be supplied with any proportion of hot or cold water, without the operation of lading, and the same can be discharged by a moveable plug in the bottom of each tub. In the middle of the wash house is placed a large vessel, in which the linen is boiled by steam. During this operation, the vessel is made close by a copper cover suspended over it, and counterpoised so as to be easily moved up and down by the hand.

" THE Laundry is similar to that at the Derbyshire General Infirmary, with the addition of machinery for turning the mangle, by which much labour is saved. A separate hot closet is here fitted up with two sliding horses, similar to those in the laundry of the Derbyshire General Infirmary, employed solely for the purpose of drying and airing beds."

Remarks on the Importance of Pure Air and Free Ventilation, as contributing to the superior success of Hospitals.—

By Sir G. BLANE, Bart. M.D.

" THE sick and wounded of the Navy were first received into Haslar Hospital in the year 1754, and it was completed about two years afterwards. Plymouth Hospital began first to be occupied in 1760, but was not completed till 1764. It is only subsequent to this that the two Hospitals can be fairly compared, and it is during war that this comparison seems most just and most interesting, as the cases are then most similar, and it is less likely that at that time any cases will be sent for cure but such as are fit objects for a Hospital.

" TABLE, shewing the Number of Men Admitted, and who have Died at Haslar and Plymouth Hospitals, from the Year 1755 to the Year 1797, distinguished according to the periods of Peace and War.

	HASLAR.		PLYMOUTH.	
	Received.	Died.	Received.	Died.
From 1755 till 1763, both years included.....	34,935	1,869 or 1 in 18.6.....	25,579	1,691 or 1 in 15.3
From 1764 till 1777, both years included.....	31,389	1,004 or 1 in 31 2.....	11,625	454 or 1 in 25.6
From 1778 till 1782, both years included.....	52,503	3,137 or 1 in 16.7.....	27,632	1,109 or 1 in 24.9
From 1783 till 1792, both years included.....	25,065	1,157 or 1 in 21.6.....	25,221	1,309 or 1 in 19.2
From 1793 till 1797, both years included.....	32,498	2,262 or 1 in 14.3.....	21,277	861 or 1 in 24.7

"It appears then, from the annexed table, that during the late and the present wars, there has been less mortality at Plymouth than at Haslar. These two institutions are equally well supplied with accommodations, diet, and attendance. They are both kept in a state of the most perfect cleanliness and good order, so that in all points they are justly considered as models of what Hospitals ought to be, and are perhaps inferior to none in every advantage attainable by such institutions. It is presumable, therefore, that the difference of mortality is owing to the difference in point of air. Plymouth has some advantage in respect to climate, being considerably warmer in winter, which is of great advantage to those, more particularly, who are affected with pulmonic complaints, who constitute a considerable proportion of the sick. It is also situated on a drier soil. But the chief difference in these two Hospitals consists in the size and distribution of the buildings. Haslar Hospital consists of one great ceuter building, and four pavilions running backwards from each corner of it. These are placed in pairs, standing parallel and very close to each other lengthwise so as to intercept the free course of the air. It is calculated to hold with ease eighteen hundred men. Plymouth Hospital consists of twelve separate similar and equal buildings, ranged in a large square, with wide intervals between each. Of these twelve, however, ten only are occupied by the sick. It is calculated to hold with ease twelve hundred men. M. TENON, a French Physician, who, by his king's order, had made a comparative review of most of the Hospitals in Europe, with a view to the reformation of those in Paris, and visited this one in 1787, gives the preference to it over all others, in regard to the judicious construction and distribution of the buildings."

On the Injurious Effects of Crowding Patients.—By DR. CLARK.

"CROWDING too many sick persons into one ward is always attended with the most dangerous consequences. This might easily be demonstrated from the works of various medical writers of great authority; but the following fact, adduced on the authority of Mr. STOKOR, an ingenious Surgeon at Hexham, who served in the navy during the American, and part of the present war, places this important subject in the most striking point of view. 'When our forces were withdrawn from Toulon, the sick were removed from the Hospital to Porto Ferrajo, in the island of Elba, and I was appointed by the Commander-in-Chief to superintend all that were landed.

"For want of room the sick were all lodged together; and, not being able to procure bedsteads or cradles, they were put into separate hammocks, fixed in one single row, in the middle of a large ward. An empty space, of one yard at least, was left all round the ward; and the hammocks were placed so far asunder, as to allow the attendants to pass readily betwixt each. The sick, when received into this Hospital, had no symptoms of sea-scurvy. They were, however, allowed animal broths, with plenty of fresh vegetables, and, each man, two lemons daily. In less than a fortnight the sores of the patients assumed a worse appearance, and the stumps of those who had undergone amputation and digested well, now became flaccid and gangrenous, and discharged copiously a dark coloured offensive matter: excessive diarrhoea and cold sweats succeeded, which, in a few days, terminated the existence of the patients, if they were not speedily removed from the contaminated air of this Hospital. I also observed, if a patient with the slightest sore lay next a patient in a worse disease, and more especially if he lay betwixt two such patients, his sore very rapidly degenerated. Even the slightest scratches in the nurses became formidable sores.

"In this dilemma I caused one half of the sick to be carried on board a ship; and in the course of five or six days their sores, as well as the sores of those who remained in the Hospital, assumed a more favourable aspect, and their health most obviously improved. In the course of fourteen days more the sick on board ship were, from some cause or other, sent back to the Hospital. All the patients, in consequence of being crowded together, became worse in a few days; and their diseases could only be removed by sending one half of the patients back to the ship."

Remarks on Monthly and Annual Returns of the Sick.—By DR. CLARK.

"IN the ANNUAL REPORTS of Hospitals and Infirmeries, an ABSTRACT of the number of patients admitted, and the manner in which they are discharged, is given in the following form, with some trivial variations.

IN-PATIENTS.		OUT-PATIENTS.	
Remaining in the house, April 4, 1801	86	Remaining on the books	415
Admitted this year	557—643	Admitted since	475—890
Cured	358	Cured	301
Relieved	23	Relieved	99
Irregular	19	Non-attendant	76
Made Out-Patients	130	Made In-Patients	5
Dead	28	Dead	8
Remaining in the house	85—643	Remaining on the books	410—890

"By constructing the ABSTRACT in this manner no useful information can be obtained, because the particular diseases are not mentioned. Nay, even the *real* proportional mortality cannot be ascertained, because several deaths happen among those who formerly were *In-Patients*, but who are discharged under the article "*Made Out-Patients*," which cannot be brought to the account; and the discharges of the *Out-Patients* are made in such a way that no dependence can be placed on them.

"THESE abstracts, as commonly managed, can indeed answer no other purpose than to impress the Governors with a notion that their charity is extremely successful, when, perhaps, it is the very reverse; and induce them to believe, that the sick have every accommodation, whilst several perish annually from being promiscuously crowded, and whilst others, from the same cause, make their retreat from the Hospital, and, though unnoticed, die with more quiet at home.

"ALTHOUGH it is obvious that many important advantages would result to Hospitals and Infirmeries from the establishment of ACCURATE and COMPREHENSIVE RETURNS of THE SICK, yet, it must be confessed, that they will never attain to any great perfection without the express attention of the Physicians and Surgeons respectively to the *entry*, and to the *mode of dismissing* their patients.—There should be no endeavour to make the practice appear more successful than it really has proved. Should this, however, be attempted, IMPROVED RETURNS, from having the *particular* diseases prefixed to the event, will still afford much useful information, and also serve to detect any peculiar *management* which may have been used to place the practice in too favourable a light.

"By establishing a PLAN of ACCURATE RETURNS of THE SICK; by preserving them in the RECORDS of the Charities; and by publishing the GENERAL ANNUAL RETURN of *diseases and operations* in the REPORTS of Hospitals, Infirmeries, and Dispensaries, the following, amongst other important advantages, will accrue:—1. The prevalence of diseases at different seasons and different places, together with their comparative and proportional mortality, will be readily ascertained. 2. Hospitals or Infirmeries will, by these means, have the

power of improving each other; for instance, if it be found that in *one Hospital compound fractures, and other diseases* requiring quietude and pure air, are attended with *great mortality*, and in *another Hospital* with *inconsiderable risk*; and if it be also found that the *former* charity is crowded and ill ventilated, whilst the *latter* enjoys pure air and good accommodations, upon proper representation, the *Governors* will be induced to improve the *defective* institution. 3. The chance of life, after important operations, will be ascertained upon a large scale. 4. The comparative safety and of recovery after amputation, by different modes of operating, will be more justly estimated, and the superiority of one mode over another ascertained."

Remarks on the Number of Physicians and Surgeons necessary to transact the business of an Infirmary.—By Dr. CLARK.

"IN county Infirmaries too many Medical Officers are frequently appointed, from which cause the business becomes so much divided, as to afford a very limited field for experience. This is peculiarly unfavourable to the improvement of the operative part of surgery; where dexterity, expertness, and skill, are only to be acquired by almost constant practice.

"AN Infirmary capable of accommodating, at one time, one hundred, or even one hundred and fifty In-Patients, can, in my opinion, require no more than two Ordinary Physicians and two Ordinary Surgeons, to transact the business; and therefore a greater number should not be appointed. But, at the same time, such an institution should also have an establishment of two Assistant-Physicians and two Assistant-Surgeons, to supply the places of the Ordinary Physicians and Surgeons, in case of absence, death, or resignation.

"INFIRMARIES being, in a peculiar manner, calculated for the improvement of young men educating for the profession, it is important that it should be rendered easily accessible to them. The apprentice of every Surgeon in the place, therefore, during the last two years of his indenture, should, upon paying three guineas annually to the charity, receive a ticket, giving him the privilege to see the surgical operations, and to attend the Physicians and Surgeons at the hours of visiting patients.

"FROM this source, the declining funds of Infirmaries would receive support; but what is still of greater consequence, the public would be supplied with more skilful Surgeons, upon their entering into employment.

"IT may be objected, that this proposal is encroaching on the emoluments of the professional men, especially the Surgeons, who give their gratuitous attendance to the Hospital. But the pupils of Surgeons, having the superior advantages of being *dressers*, it could not, it is apprehended, diminish the applications for such offices; but, if it were, the interest of the Hospital and the public ought to be preferred, and the Physicians and Surgeons no doubt will rest contented with the honourable distinction conferred on them by their election, which places them in a situation of attaining the highest eminence in their profession."

Extracts from Pearson's Life of W. Hey, Esq. F.R.S. of Leeds.

"BY the resignation of Mr. HEY, his official connexion with the Infirmary ceased; but he was requested by the Medical Officers to attend the chirurgical operations there, whenever it might be agreeable to him; and he frequently availed himself of this obliging invitation. He shewed a lively interest in every matter which affected the welfare of the institution; and, on the discussion of any measure of importance, his opinion had always great weight with the Trustees. On two occasions, where the prosperity and advantage of the charity were deeply interested, the weight and influence which were attached to Mr. HEY's judgment, on subjects concerning which he was so thoroughly competent to offer an opinion, conciliated the differences which existed among the Trustees, and produced an unanimity of sentiment. It was on the 30th of January, 1815, that the appointment of an Apothecary to the Infirmary, with an increase of salary from forty to one hundred pounds per annum, was vested in the medical officers of the charity. This stipendiary officer had been formerly elected by the Trustees at large; and several persons, of some consequence in Leeds, attended purposely to oppose the meditated alteration; but, on hearing Mr. HEY's representation of the benefits that would probably result from the change, they were convinced by his arguments and acquiesced in the proposed measure.

"THE office of Apothecary to an Hospital is a charge of high responsibility, in which the welfare of the patients and the credit of the institution are deeply concerned. He should be competently acquainted with his professional duties, and be instructed, at least, in the leading principles of physic and surgery. He ought to possess a good understanding, have a respectable character, fixed moral habits, and be patient, diligent, vigilant, and humane, devoting his whole time and attention to the service of the charity in which he is engaged. On no pretence whatever should he be allowed to attend on any private practice of his own, nor be connected with any other business than that of the institution. It is obvious that no person endowed with such qualifications, and subjected to such restrictions, will undertake the office without a salary, forming, in his opinion, a compensation for the duties required and privations exacted, and such a fair and equitable remuneration will not only render him more satisfied in his situation, but be an inducement to him to prolong his residence, a circumstance, not merely of convenience to those connected with the Institution, but of great importance to its tranquillity and welfare. It is undoubtedly incumbent on Trustees to manage the several departments of a charitable institution on the principles of a strict and exemplary economy; but occasions present themselves on which some departure from these principles becomes necessary; since it is obvious, that a contract for talents and character must be conducted upon higher principles than a contract for coals and candles, if the parties would avoid the imputation of a discreditable parsimony. To act otherwise, would imply a solecism similar to that of a man in private life who should diligently inquire for the cheapest medical advice without troubling himself about the most able.

"THE conduct of the Trustees in relinquishing their right of voting upon this occasion, and transferring the power of electing into the hands of those who are alone duly qualified judges of the proper person to be invested with the office of Apothecary, offers a fine example of disinterestedness, and merits the warmest praise. The election of the officers of a charity by a majority of the suffrages of the Governors, includes many and conspicuous advantages; yet, like a multitude of other good usages, it has been subjected to great and lamentable abuses. It is but too well known, that large sums of money have been subscribed by the candidate and his friends previously to an election, to secure the office for an individual, thus defeating a less rich, or more scrupulous competitor, by an overwhelming majority. This evil had acquired such a currency, and had grown to so monstrous a magnitude, that many societies determined to render such unworthy measures almost abortive, by adopting wise and wholesome regulations; nevertheless, it may be feared that the abuse is not yet wholly extirpated.

"IT was early in the year 1819 that a motion was expected to be offered to a numerous Weekly Board, for increasing the number of Physicians and Surgeons of the Infirmary. Mr. HEY had gained intelligence of the intended proposal, merely by report; but, conceiving it to be a measure that might not only open a way to further encroachments on the constitution of the charity, and lead to perpetual intrigues among the medical men of the town, but would be likewise injurious to the institution and to the profession in general, by

gradually deteriorating the character of the Medical Officers, more especially the Surgeons, he attended the Board to give his decided opposition to the proposal. How far those who had meditated the bringing forward of such a motion were restrained by the presence of Mr. HEY, can only be conjectured; the subject, however, was not introduced. 'As it was sufficiently known that such a measure had been contemplated, Mr. HEY avowed his purpose in attending the present meeting, and delivered his sentiments at large upon that subject. His speech was well arranged, perspicuous, and convincing, and it appeared to produce perfect unanimity among the Trustees then assembled. It was requested that his arguments might be embodied, and printed in the newspapers for the perusal of the absent Trustees, or that some entry might be made in the Weekly Board book of the opinion of that meeting; but as there was no motion before the Board, Mr. HEY requested, that what he had said might be considered as private conversation only.'

"As the subject on which Mr. HEY delivered his sentiments, is one of great importance, and upon which some diversity of opinion prevails, not indeed among well informed medical men, but with the governors of some charitable institutions, it is greatly to be regretted, that the well digested opinion of so competent a judge has not been preserved. This point has indeed been discussed by the late Dr GREGORY, of Edinburgh, with great ability, precision, and strength of reasoning, upon a case not very dissimilar from this, which related to the Royal Infirmary in that City. He has, in his invaluable memoir, shewn, by an invincible train of argumentation, the advantages resulting from employing no greater number of professional men in an infirmary, than are necessary to supply the wants of the patients. It must be obvious, indeed, to every one who will exercise the patience of considering it, that, by multiplying medical and surgical attendants in a charitable institution, the business will be most probably done with less exactness, care, and punctuality, than when the appointments are duly proportioned to the number of the sick. Every superfluous attendant will diminish the responsibility of those already stationed there; by abridging their opportunities of practice, their individual improvement, and that of the art they profess, will be obstructed, and the credit attached, by common consent, to the situation of an Hospital Surgeon being thus divided, a powerful stimulus to exertion will be conspicuously abated. There are, undoubtedly, many professional men who would fulfil their duty under every disadvantage, from higher considerations than those of emolument, reputation, or honourable distinction; yet, while men retain the sentiments and passions of human nature, it cannot be wise to withdraw the impulse arising from inferior considerations, and require them to engage in an employment of much labour and anxiety, solely from the pure and elevated motives of benevolence and humane feeling, without one single inducement of a lower order, these inducements not including any considerations at variance with the moral or social character of a member of civil society."

Address to the Public, circulated in 1820, in favour of the Asylum for the Recovery of Health.—His Royal Highness the DUKE of YORK, Patron.

"It is well known to those who have visited the medical establishments on the continent, that there exist in France, under the name of *Maisons de Santé*, houses for the reception of the sick; in which, though partly maintained by the public, the patients admitted into them pay weekly sums proportioned to the accommodations they enjoy. By such establishments the three following advantages are obtained.—1st. Such as are poor, but not wholly without property or resource, are provided with accommodations more suitable to their circumstances than they could obtain in public Hospitals.—2nd. The Hospitals are relieved by excluding persons that ought not to be wholly maintained by charity, and they are consequently able to receive a larger number of the totally destitute.—3rd. Persons unable from the absence of domestic connexions, as well as narrowness of income, to procure for themselves the attentions and comforts which a state of sickness requires, are provided with proper nurses, separate apartments, and other conveniences, which could not be obtained at their own houses.

"THESE establishments have long been carried on successfully in France, and have enjoyed a large share of public estimation. They have been adopted in Russia, Sweden, and other countries, and it is the opinion of many persons, conversant with the state of our Hospitals, whose experience among the various classes of society in this country qualifies them to judge, that similar institutions may be introduced with great public benefit in England; as all the reasons which led to their introduction and secure their continuance abroad, exist here perhaps in greater force. The number of unsuccessful applicants to our Hospitals proves, that some measure is wanted to extend the means of relief and, at the same time to enable those Hospitals to receive a larger number of that description of patients for whose benefit they were originally instituted. The laxity in the principle of independence, but too plainly observable in the present times, requires to be met by a firm denial of the aids of charity to those who have resources for their own support; while, on the other hand, it is equally desirable that such as have honourably maintained themselves in independence, should receive succour in the hour of sickness, without any sacrifice of those meritorious principles. If such an establishment existed, the Governors of Hospitals might fairly refuse all improper objects for gratuitous relief; while, on the contrary, it is at present well known that individuals are frequently received because, though not in absolute distress, they could not at their own homes procure all that their state might require.

"IN this country also, there are, no doubt, many who, from a sense of delicacy acquired from a good education and the habits of better days, or from honest feelings of British independence, would be averse from going into Hospitals, and would rather submit to the effects of severe disease and to the want of needful aid and attendance at home. Should the pressure of afflicting maladies, in some few instances, even overcome that repugnance, the individuals must enter into such an establishment with a broken spirit and a feeling of degradation that would have a tendency to retard, if not altogether frustrate, every hope of recovery. In these circumstances it would appear very beneficial that an Asylum should be provided which, without wounding any feeling of delicacy or spirit of independence, might afford patients accommodation and relief, suited as far as possible to their former habits of life, which no well regulated mind ought to reject. Females living on narrow incomes without domestic connections, and well educated persons reduced by the casualties of life, would find in such an establishment a welcome retreat, where not only disease might be combated, but anxious solitude and separation from friends soothed and consoled, by that kind attention and prompt and various succour, which the unfortunate sufferers could have no chance of obtaining at their own dwellings.

"It is also presumed that the sick members of the families of many respectable artisans and mechanics, clerks on small salaries, apprentices, domestics of the higher class and of irreproachable character, would be often glad to avail themselves of such a resource; and the members of friendly and benevolent societies would find it the most eligible mode of laying out that money to which during the period of their sickness they are entitled. For, besides lodging and diet, they would have the benefit of experienced nurses, resident medical officers, a store of medicines purchased and made up under the inspection of responsible persons, and directed by the advice of men, whose high and established character must create a just confidence in their exertions.

"ANOTHER important object of this establishment will be the receiving persons afflicted by protracted disease, requiring for their cure perhaps a twelve month's confinement or more to their beds, and consequently improper cases for public Hospitals, where they

occupy the room of numbers who might be relieved in the same time. Yet, unless received into some Asylum, such unhappy patients would fall victims to their diseases, or drag out a miserable existence, burthensome to themselves and shocking to humanity.

"It is not the least of the advantages which this institution will afford, that Divine Service will be regularly performed by the Chaplain attached to the establishment; through whose ministry its inmates will have an opportunity of attending the duties, and of receiving the consolations of religion."

On the frequency of Herniary Complaints.—Extracted from an "Account of the New Rupture Society."

"It has been estimated that at least one person in fifteen is ruptured; but, among those classes of the community which are much exposed to laborious employment, the average may be fixed at one in eight or nine. This complaint is not confined to any particular age or sex, nor is it the consequence of depraved habits or immoral behaviour; but it arises either from a natural bodily defect, or from very unusual exertions at any period of life; and can be neither foreseen nor avoided by the wealthy or by the poor. Its tendency is so alarming that, without timely aid, it generally terminates by a painful and rapid dissolution in early life, or during the vigour of manhood; although, in a majority of cases, its fatal consequences may almost certainly be prevented by the careful application of an appropriate Truss or Compress.*

"Among the afflicted poor, where no means of relief have been resorted to, during the existence of ruptures and prolapses, the unhappy objects are commonly disabled from fulfilling the ordinary duties of their stations; insomuch, that in the army and navy it is an invariable rule to dismiss from the service those men who become ruptured by the violence of their exertions. How lamentable a fact is it, that many thousands of individuals, perhaps during the period of full health and activity, should drag on a most useless and miserable life, for want of either the means or the knowledge requisite to obtain relief, when that knowledge and those means can so easily be provided by their affluent neighbours! The great importance therefore of relieving the industrious but afflicted poor, labouring under herniary complaints, must be sufficiently obvious to every reflecting mind."

On Friendly Societies.—By Dr. CLARK.

"THE Workmen in the Manufactory at Etruria have subscribed, in the book appointed for the district, £20 towards building the *Medical Dispensary and House of Recovery*, and also the sum of Sixteen Guineas for the support thereof, to be paid every year; which last money they will raise by the very moderate contribution of one half-penny per week for each person, and pay it into the hands of their employers at fixed periods.

"THEY will be entitled thereby to recommend EIGHTEEN patients every year to the *House of Recovery*, and to have besides EIGHTEEN patients constantly on the books of the *Dispensary*; and supposing that these EIGHTEEN should be changed once in every month, they will have it in their power to procure relief, in good advice and medicines, for TWO HUNDRED AND SIXTEEN persons within the year.—Other sums would be entitled to proportional advantages."

On the Regulations of Military Hospitals.—Extracted from a Pamphlet published by Authority.

"THE Surgeon is responsible for the proper classification of diseases, in their respective wards, which, under due arrangement, may at all times be expected from the commencement of the establishment of Regimental Hospitals; and the rule of placing similar diseases in contiguous beds, should be strictly adhered to.

"EVERY patient, on his admission to the Hospital, is expected to have in his possession two shirts, one waistcoat, and two pairs of stockings. Hospital dresses, consisting of the following articles, are provided under the authority of the Director-General, viz. for each patient a cotton or flannel gown, ditto trowsers, ditto night-cap, and a pair of list slippers.

"THE wards are to be ventilated according to the state of the weather and the diseases of the patients, the Surgeon being responsible for the due performance of this duty, as injudicious ventilation is hurtful to the sick.

"THE custom of washing floors, and covering them with sand or saw dust, is positively forbidden; dry-rubbing is to be substituted, by means of the scrubbing-brush mounted on the heavy block. In cases where the state of the floor renders washing absolutely necessary, for the removal of filth, it is to be done under the special direction of the Medical Officer.

"EVERY patient is to be provided with a clean shirt, and (if he can sit up) with a clean pair of stockings, twice a-week, or oftener if necessary; and with clean palliasses once a month, and clean sheets once a fortnight, or oftener as particular cases may require. The patients are to be shaved at least thrice a week, and every possible attention paid to personal cleanliness."

* As many persons do not know that *Females* are liable to this heavy affliction, a comparative statement has been given by Mr. BLAIR, shewing the proportion to be nearly as one in six.

APPENDIX.

ON THE CLASSIFICATION OF PATIENTS.

IN the Report, page sixth, it is stated *generally* that the only division of Patients, in the CHESTER INFIRMARY, is into *Male* and *Female*; but it must be known to most subscribers that the Fever and Magdalen Patients are strictly confined to their respective apartments in the attic story, and, moreover, that there is a ward, in the same quarter, for the reception of Male Patients labouring under disease of the eyes. The following analysis, however, of the cases of Patients *now* in the long wards, fully bears out the statement as to the want of accommodation for the due separation and classification of the sick and hurt :—

Mens' Long Ward.—1 Surgical case, 2 ditto, 3 ditto, 4 Medical, 5 Surgical, 6 ditto, 7 ditto, 8 ditto, 9 Medical, 10 Surgical, 11 Medical, 12 ditto, 13 Surgical, 14 Medical, 15 Surgical, 16 ditto, 17 Medical, 18 ditto, 19 Surgical, 20 ditto, 21 ditto, 22 Medical.

Womens' Long Ward.—1 Surgical, 2 ditto, 3 Medical, 4 Surgical, 5 ditto, 6 ditto, 7 ditto, 8 Medical, 9 ditto, 10 Surgical, 11 ditto.

On the Advantages of Incorporating a Dispensary with the Infirmary.

FROM what has been said it is evident that the spirit of the Rules, especially those relating to the treatment of the Out-Patients, has widely been departed from. Indeed the system pursued has long tended to involve the prosperity of the Institution; but by incorporating a Dispensary with the Infirmary, in the way proposed, the difference of opinion concerning the superior utility of different Institutions would be prevented, some being sure to prefer an Infirmary and others a Dispensary, from which cause the means of support would be divided and the funds of these charities, when loaded with their respective house establishments, might prove inadequate to answer the benevolent intentions of their patrons. By adopting the principle, however, of an "United Infirmary and Dispensary," the additional charge for a second Apothecary would only be required, to secure to the public a system of the most responsible and efficient Medical assistance. The following modification of the Rules, therefore, is respectfully submitted to the consideration of the Governors and Subscribers in general :—

1. Subscribers of One Guinea per Annum to have the privilege of keeping *Two* Patients upon the Books at a time as Out or Dispensary Patients, by which arrangement Subscribers would, upon a fair calculation, be enabled to give assistance, in the best advice and medicines, to *Twenty-four* of their sick fellow creatures annually.

2. Subscribers of Two Guineas to have similar privileges as to Dispensary Patients; also to have the power to recommend One In-Patient annually.*

3. Subscribers advancing their Annual Subscriptions from £2 2s. to £3 3s. to enjoy similar privileges with the above as to Dispensary Patients; also to recommend two In-Patients annually, or optionally, *One* In-Patient and *Two* Persons standing in need of Single Trusses, or *One* Person requiring a Double Truss; and so in proportion for every larger subscription.

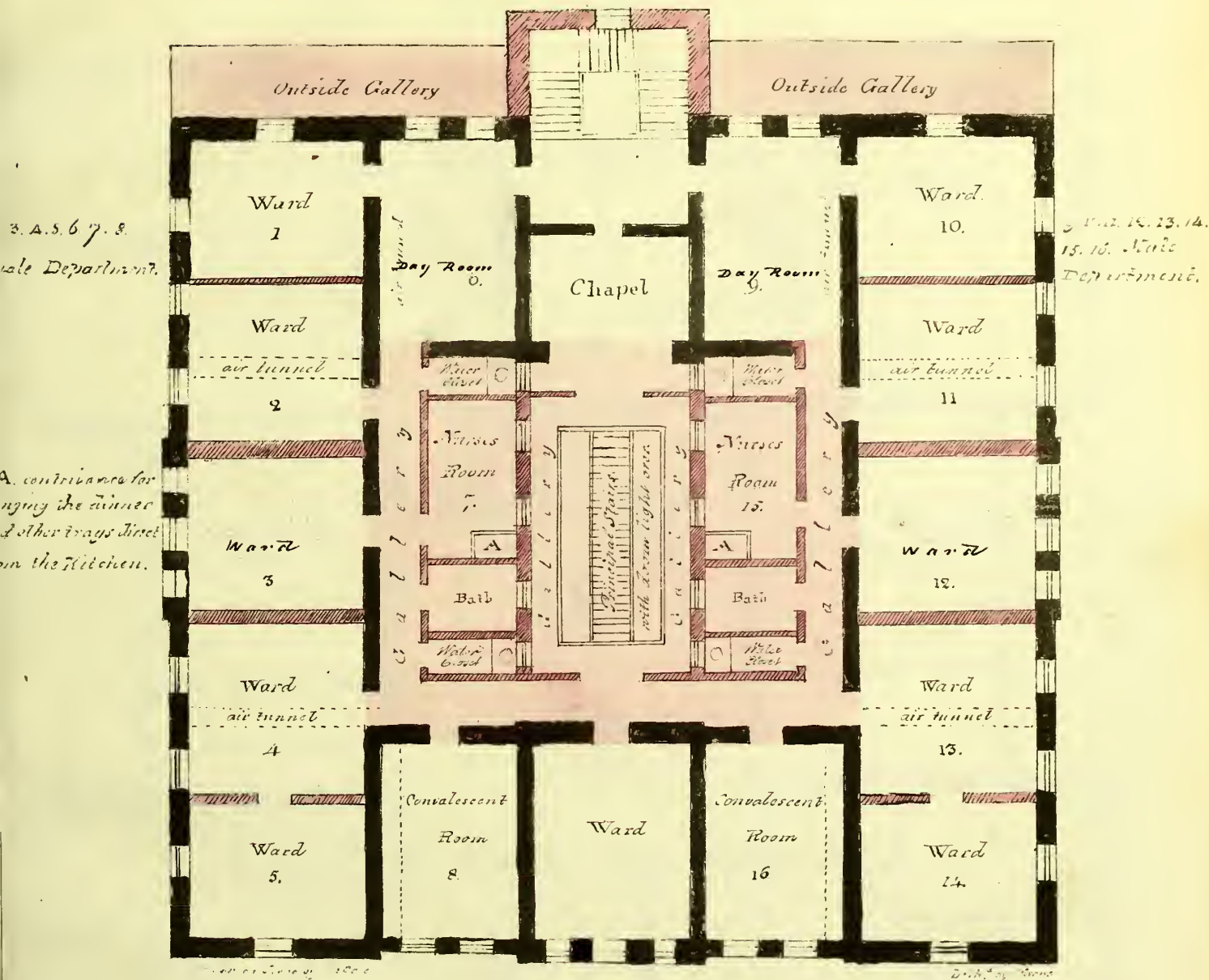
4. Subscribers *in general* to have the power to recommend One Patient annually, upon payment being made towards defraying the expense incurred for his board, after the manner of the Asylum for the Recovery of Health, and of that formerly pursued as to Fever Patients; and further to have the privilege of sending *any number* of Patients for Vaccine Inoculation.

5. That the Letters of Recommendation be Printed in the form of Bankers' Cheque Books, so that the Subscribers, by keeping a Register of the Patients recommended, (with results) may readily ascertain their *existing* privileges.

" My exertions on this occasion will, I hope, be attributed to no other motive than an ardent zeal to place this (the Chester Infirmary) upon a footing with the most approved Institutions, for relieving, in the most effectual manner, the distresses of the afflicted, and promoting the improvement of the science of medicine."

G. C.

* The Rules of Public Charities ought in policy to be founded in liberality, but care, at the same time, should be taken so to construct them as to call forth general, rather than large, Annual Subscriptions, but there is every reason to believe that few of the Subscribers are fully aware of the great expense incurred in the treatment of In-Patients. Indeed, it appears that upon an average of the last four years expenditure at the Chester Infirmary, every In-Patient costs the Institution, inclusive of the expense of treating the Out-Patients, the sum of Four Pounds Two Shillings!

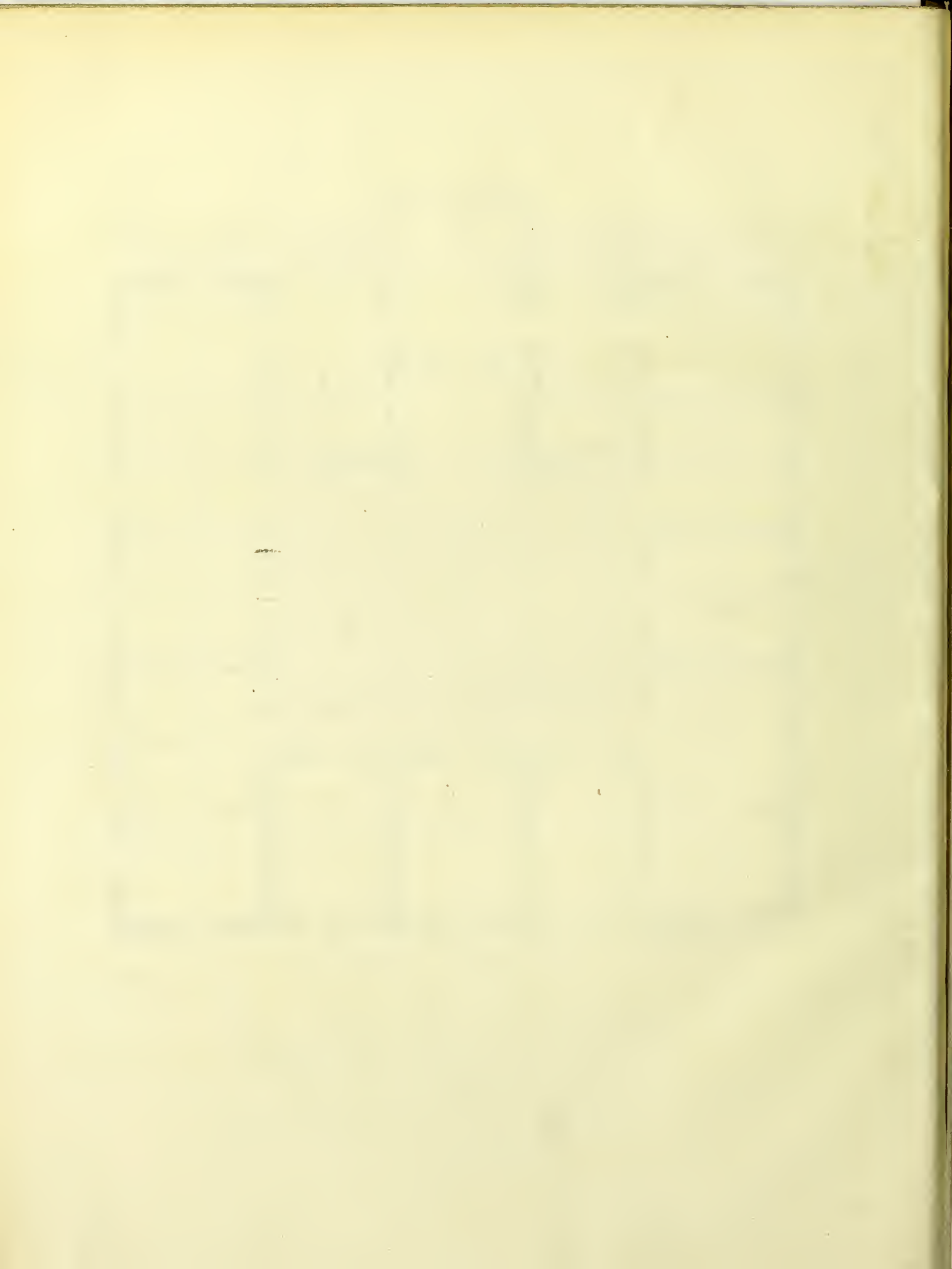


FIRST FLOOR

of
The CHESTER INFIRMARY according
to the Plan for roofing in the Quadrangle
together with
the covered Galleries for the exercise of
the Patients on the East Side of the Building.

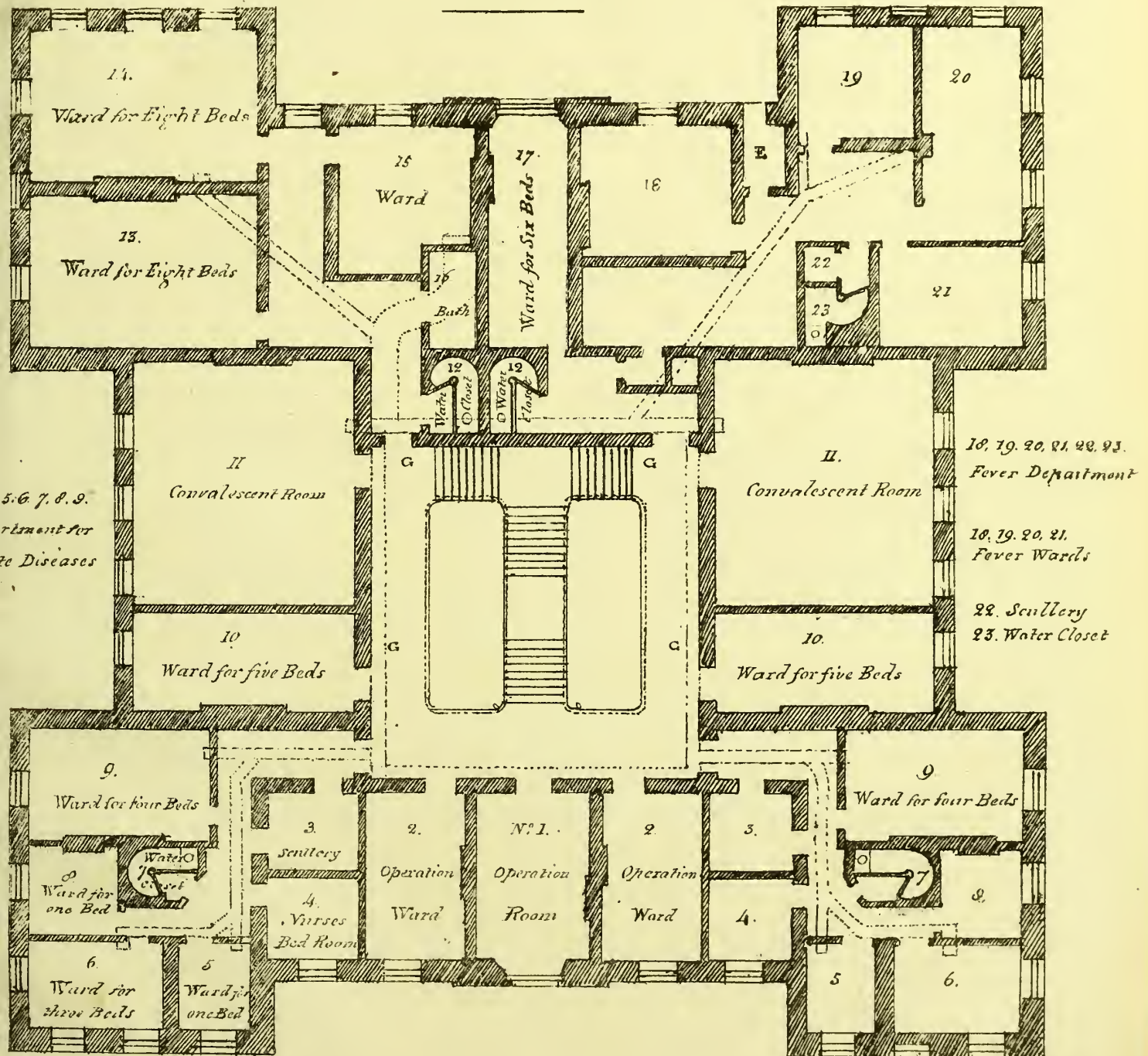
By

WILL COLE Junr. Archt.



DERBY INFIRMARY

UPPER STORY



Drawn on Stone by W. Cole Junr and
 Chas. Carter.

